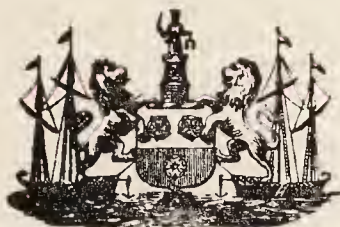


SOUTHAMPTON  
PORT SANITARY AUTHORITY.

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THE  
**Sixth Annual Report**  
ON THE  
SANITARY CONDITION,  
OF THE  
**PORT OF SOUTHAMPTON,**

***For the Year 1897,***

BY


A. WELLESLEY HARRIS,  
M.R.C.S. Eng., L.S.A., D.P.H.,

*Medical Officer of Health to the County Borough and Port of  
Southampton.*



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**. SOUTHAMPTON .**  
PORT SANITARY AUTHORITY.

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**ANNUAL REPORT**

For the Year ending 31st December, 1897.

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TO THE MAYOR, ALDERMEN, AND COUNCILLORS  
OF THE  
COUNTY BOROUGH OF SOUTHAMPTON.

GENTLEMEN,

In compliance with the Local Government Board's Regulations, I have the honour to present to you the Sixth Annual Report on the Sanitary Condition of the Port of Southampton for the year 1897. As in previous years the systematic inspection of vessels entering the Port has been carried out, and the necessary steps taken to protect the health of the floating population.

Careful attention has been given to prevent the extension of infection to the residents of the Borough from imported cases of infectious disease.

\*It will be seen that the net. tonnage of vessels entering the Port still increases: due to the increased size of the vessels frequenting the Port, and to a greater number arriving in comparison with previous years, and in consequence the work of sanitary supervision has been increased.

Much additional responsibility has arisen by the establishment at Southampton of the Transport Service.

During the year under review, the arrival of Troops from India has been a special cause of anxiety owing to the presence of Plague at Bombay. Each of Her Majesty's Transport Ships arriving with Troops from the infected district has been boarded off Netley by your Port Medical Officer, in conjunction with the Naval and Military Representatives, and by their courteous and valuable assistance all persons on board have been medically examined before proceeding to Dock.

The joint inspection of Military and Municipal representatives, established in 1896, has been carried out this year with perfect accord and appreciation of all concerned, and I desire to place on record my personal thanks for the kindness and valuable aid rendered by the gentlemen already referred to, without whose assistance the satisfactory medical examination of Troopships would have been impossible.

In this report I shall refer briefly to the practical effect and working of the New Regulations, instituted by the Local Government Board in pursuance of the Public Health

\* See Table B.

Act, 1896, and also to the desired improvement of more suitable means for the isolation of the infectious sick in passenger vessels.

I am, Gentlemen,

Your obedient Servant,

A. WELLESLEY HARRIS,

M.R.C.S., D.P.H., ETC.,

*Port Medical Officer.*





## STATISTICAL.

Table A. contains the Board of Trade Returns respecting passengers leaving this Port for places out of Europe, amounting to 60,059, against 69,020 in the previous year. The medical examination of Emigrants embarking at this Port is controlled by the Board of Trades' Medical Officer. In the event of any person discovered to be suffering from an infectious disease their isolation in hospital is secured by the Port Sanitary Authority.

No account can be obtained of persons passing through the Port for places on the Continent or the Channel Islands.

Table B. deals exclusively with the arrival of Ships and Passengers.

The figures show an increase in the number of ships and passengers arriving at this Port in 1897.

The Total number of passengers arriving from all Countries, including crews, amounted to 203,923, against 196,677 in 1896, and 97,227 in 1892; these figures do not include troops disembarking here.

Many large vessels arrive in the River to disembark Southampton passengers, records are taken of those persons landing only, and not of passengers or crew in transit to other Ports.

\* **TABLE A.**

PASSENGERS.	1892.	1893.	1894.	1895.	1896.	1897.
Number of Passengers who left for places out of Europe ... ..	21,282	41,563	52,045	67,253	69,020	60,059
Number of Alien Passengers who arrived from the Continent as Deck Passengers, or who after Landing proceeded by train as third-class Passengers	364	391	1,869	2,363	1,190	940

\* *For these figures I am indebted to the Board of Trade.*

TABLE B.

RETURN OF SHIPS' TONNAGE, PASSENGER ARRIVALS, &c., FOR THE YEAR  
1892, 1893, 1894, 1895, 1896, AND 1897.

Year.	Number of Arrivals from Foreign.	Number of Arrivals from Home Ports (Coasters).	Number of Passengers arriving at the Port from Jersey other than Jersey.	Number of Passengers arriving from Jersey.	Number of Crews Arriving.	Number of Ships of 2,000 Tons and upwards.	Number of Ships under 2,000 Tons.	Net Tonnage of the Vessels entering the Port.
1892	*2,128	6,256	"A." 13,690	26,890	56,647	111	1,698	2,562,549
1893	†2,221	8,609	43,391	27,581	70,614	416	1,807	2,936,973
1894	‡2,458	9,165	66,371	30,705	76,680	453	2,005	3,167,864
1895	2,501	9,443	70,334	30,500	87,998	475	1,963	3,435,938
1896	**2,614	9,818	74,310	30,274	91,867	438	2,176	3,596,945
1897	α†2,587	10,134	81,594	31,784	90,545	472	2,115	3,849,553

\* (1892)—Number of Arrivals 2,128—319 of which called here without reporting; no record of Crews or Passengers remaining on board; no average possible.  
† (1893)—Number of arrivals 2,221—278 of which called here without reporting; no record of Crews or Passengers remaining on board; no average possible.  
‡ (1893)—414 from Foreign Ports: 2 from Home Ports.  
‡ (1894)—Number of arrivals 2,458—286 of which called here without reporting; no record of Passengers or Crews remaining on board.  
|| (1895)—Number of arrivals 2,501—256 of which called here without reporting; no record of Crews or Passengers remaining on board.  
\*\* (1896)—Number of arrivals 2,614—315 of which called here without reporting; no record taken of Crew or Passengers remaining on board.  
α† (1897)—Number of Arrivals 2,587—353 of which called here without reporting; No record of Crews or Passengers remaining on board.  
All Passengers other than those from Jersey are included in column marked "A."; 14,607 of which arrived from the Continent of Europe.

## MEDICAL AND GENERAL.

All vessels arriving in the Dock, or at the various Berths and Quays, are immediately visited by the Port Sanitary Inspector, who receives from the Ship's Surgeon, or from the Master, upon a form provided,\* information as to the health of the passengers and crew during the voyage. If during the voyage the vessel has been free from any infectious sickness, the Inspector makes an examination into the sanitary condition of the vessel, and reports thereon to the Port Medical Officer. Should, however, any case of infectious sickness be reported, the person or persons so suffering are detained for the examination of the Port Medical Officer, and arrangements made for the isolation of the patient and the disinfection of the vessel. Any delay in the discovery and removal of the sick is avoided since I have had the help of the Assistant Medical Officer. All passenger vessels using the Port are kept supplied with a quantity of our health certificates, on which the Surgeon fills in the required information before arrival. The vessel's arrival at Hurst, or other signalling station, is notified us at any hour, day or night, by telegram, giving your Medical Officer or Assistant ample time to arrive at the Ship's berth in the Dock, before her arrival. In the event of any sickness being present, it is immediately dealt with and precautions taken to prevent the spread of infection.

The diseases dealt with in this manner are generally Measles, Scarlet Fever, Typhoid Fever, and Diphtheria. The existence of any of these diseases on a vessel does not prevent her proceeding without interruption alongside the Dock berth.

A vessel may also proceed having Small Pox on board, but I am happy to say that the friendly arrangement made between the Port Sanitary Authority and the principal

\* See Appendix.



Shipping Companies, to stop their vessels off Netley when infected with Small Pox, and to permit the removal of the cases, and the execution of necessary disinfection before entering Dock, providing the Medical Officer is in attendance at Netley on their arrival, still continues to be carried out with the greatest benefit in a manner described in previous annual reports.

For the prevention of the importation of Plague, Yellow Fever, and Cholera, we have ample power provided by the new regulations, issued in accordance with the Public Health Act, 1896, which were explained in detail in the annual report of 1896.

#### DETAILS OF REPORTED SICKNESS.

The following Table shows the yearly summary of the zymotic or infectious disease reported on arrival of vessels, together with the steps taken for their isolation and the protection of the inhabitants of the Port :

## ZYMOTIC

The following Table gives the Particulars of Vessels  
Disease on Board, with the

Date.		Name of Vessel.	Where from.	Nature of Sickness.
January	3...	S.S. Tartar	Cape Town	Typhoid Fever
January	7...	S.S. Minho	Buenos Ayres	Five cases of Small Pox
January	29...	S.S. Thames	River Plate	Three cases of Small Pox
January	30...	S.S. Scot	Cape Town	Typhoid Fever
January	31...	S.S. Ch. Broberg	Leghorn	Typhoid Fever
February	2...	S.S. Gaul	Hamburg	Erysipelas
February	4...	S.S. Spartan	Cape Town	Six cases of Measles
March	3...	S.S. Ebro	River Plate	Beri-Beri Two cases of Typhoid
March	5...	S.S. Britannia	Bombay	Small Pox Three cases of Varicella
March	18...	S.S. Victoria	Bombay	Small Pox Three cases of Measles
March	28...	S.S. Minho	Buenos Ayres	Typhoid Fever
April	6...	S.S. Dilwara	Bombay	Plague

C.

# DISEASES.

reported on arrival as having, or having had, Zymotic measures adopted in each case.

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## REMARKS.

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Port Medical Officer examined patient and arranged for removal to Royal South Hants Infirmary. Bedding, personal effects, and Ship's Hospital disinfected.

All the cases were landed at Bahia on outward voyage, and infected portions of Ship disinfected.

Port Medical Officer boarded vessel off Netley. Patients removed to Hospital Ship "Wolf." Bedding, effects, and Ship's Hospital disinfected.

Removed to Royal South Hants Infirmary. Bedding, effects, and Ship's Hospital disinfected.

Port Medical Officer examined patient, and arranged for removal to the front part of West Quay Hospital. Bedding, effects, and cabin disinfected.

Recovered on arrival.

Recovered. All occurred on outward voyage.

Died at sea.

Recovered. Vessel boarded by Port Medical Officer. Two samples of water from Ship's tanks taken for analysis.

Died at sea.

Recovered. Port Medical Officer boarded the vessel off Netley. The attendant on the case of Small Pox was removed for disinfection, and all infected portions of Ship disinfected.

Landed at Aden, effects destroyed, disinfection carried out.

Recovered, disinfection carried out. Vessel was boarded off Netley by Port Medical Officer.

Convalescent.

Vessel boarded by Port Medical Officer. Bedding, effects, and Ship's Hospital disinfected.

Died at sea March 18th. Port Medical Officer met vessel off Netley. Crew and Troops inspected. 42 Males and Females removed in Steam Ambulance to Hospital Ship for disinfection. No. 3 Troop Deck, Ship's Hospital, and effects disinfected.

Date.		Name of Vessel.	Where from.	Nature of Sickness.
April	20...	S.S. Gaul	Cape Town	Seven cases of Measles
April	25...	S.S. Mexican	Natal	Diphtheria
April	28...	S.S. La Plata	Buenos Ayres	Measles
May	5...	S.S. Nile	Buenos Ayres	Dysentery
May	7...	S.S. Norman	Cape Town	Typhoid Fever
May	19...	S.S. S. Louis	New York	Malarial Fever
May	23...	S.S. Tartar	Cape Town	Typhoid Fever
May	23...	S.S. Ebro	Buenos Ayres	Measles Two cases of Small Pox Dysentery
June	18...	S.S. Scot	Cape Town	German Measles
June	23...	S.S. Dunera (Troopship)	Cape Town	Varicella
June	26...	S.S. Koningin Louise	New York	Measles
June	30...	S.S. St. Louis	New York	Two cases of Measles
July	3...	S.S. Clyde	Buenos Ayres	Two cases of Measles
July	7...	S.S. Medway	West Indies	Malarial Fever Typhoid Fever
July	21...	S.S. St. Louis	New York	Malarial Fever
July	28...	S.S. Preussen	Shanghai	Varicella
July	13...	S.S. Albatross	Bordeaux	Diarrhœa
August	13...	S.S. Thames	Buenos Ayres	Two cases of Measles Beri-Beri



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REMARKS.

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Six cases recovered on arrival. Port Medical Officer visited vessel and removed one case to Hospital Ship "Wolf." Bedding, effects, and cabins disinfected.

Recovered on arrival. Disinfection carried out.

Landed at Lisbon. Bedding and Ship's Hospital disinfected.

Removed to Private Nursing Home, Southampton. Bedding, effects, and Ship's Hospital disinfected.

Died at sea.

Removed to Private Nursing Home, Southampton. Bedding and cabin disinfected. Sample of drinking water from Ship's tanks taken for Analysis.

Landed at Rio, April 6th.

One case landed at Ilha Grand, April 6th. The other landed at Santos, April 29th. Bedding destroyed and disinfection carried out at sea. Port Medical Officer boarded vessel off Netley.

Recovered.

The Military Authorities dealt with these cases.

Convalescent. Going on in Ship to Bremen.

Port Medical Officer examined patients and arranged for removal, one to Rockstone House, Southampton, in a cab, and the other to Hospital Ship "Wolf." Bedding, effects, cabin, Ship's Hospital and Cab disinfected.

Convalescent. Cabins and bedding disinfected.

Died at sea. Soiled linen destroyed, Ship's Hospital disinfected at sea.

Landed at Colombo, disinfection carried out.

Recovered.

Recovered.

Died at sea. Disinfection carried out at sea.

Date.		Name of Vessel.	Where from.	Nature of Sickness.
August	25...	S.S. Paris	New York	Typhoid Fever
August	27...	S.S. Scot	Cape Town	Typhoid Fever
August	28...	S.S. Mark	Buenos Ayres	Dysentery
September	10...	S.S. Nile	Buenos Ayres	Yellow Fever
September	24...	S.S. Norman	Cape Town	Measles
October	14...	S.S. Medway	Carthagenia	Two Cases of Yellow Fever
October	16...	S.S. Gaika	Cape Town	Measles
October	23...	S.S. Thames	Buenos Ayres	Measles
October	24...	S.S. Moor	Cape Town	Two cases of Measles
October	25...	S.S. Aurette	Newport News	Typhoid Fever
October	27...	S.S. Atrato	Barbadoes	Malarial Fever
November	2...	S.S. Vesuv	Cadiz	Typhoid Fever
November	5...	S.S. Nubia	Bombay	Typhoid Fever
November	29...	S.S. Greek	Cape Town	German Measles
December	3...	S.S. Norman	Cape Town	Typhoid Fever
December	4...	S.S. Magdalena	River Plate	Varicella
December	9..	S.S. Para	Barbadoes	Beri-Beri
December	10...	S.S. Dilwara	Bombay	Three cases of Erysipelas
December	19...	S.S. Thames	Buenos Ayres	Three cases of Small Pox

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REMARKS.

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Removed to 5, Brunswick Square, Southampton. Bedding, effects, and cabin disinfected.

Port Medical Officer examined patient, and arranged for removal to Rockstone House, Southampton. Bedding, effects, and cabin disinfected.

Recovered.

Died at sea, Sep. 3rd. Port Medical Officer boarded the vessel off Netley. Bedding and effects had been burnt and disinfection carried out. Disinfection repeated by P.S.A.

Recovered. Bedding, effects, and Ship's Hospital disinfected.

Both died at sea, Oct. 8th. Vessel boarded by Port Medical Officer off Netley. Bedding was thrown overboard at sea; effects, Ship's Hospital, and forecastle disinfected.

Recovered.

Landed at Lisbon, disinfection carried out.

Recovered, disinfection carried out.

Port Medical Officer examined patient and arranged for his removal to Royal South Hants Infirmary. Bedding, effects, and forecastle disinfected. Sample of drinking water from the Ship's tanks taken for analysis.

Landed at Dania (Spain). Disinfection out by the Sanitary Authority at that Port.

Removed to Netley Hospital. Vessel boarded off Netley by Port Medical Officer and Military Authorities.

Recovered, disinfection carried out.

Port Medical Officer examined patient and arranged for removal to Royal South Hants Infirmary. Bedding, effects, and Ship's Hospital disinfected.

Landed at Vigo. Bedding destroyed, and Ship's Hospital disinfected at sea.

Died at sea.

Landed at Plymouth. Vessel boarded by Port Medical Officer off Netley.

Landed at Pernambuco on outward voyage, Nov. 11th. Port Medical Officer visited vessel on arrival. Disinfection had been carried out by Ship's Doctor.

**TABLE D.****THE PRINCIPAL. ZYMOTIC DISEASES**

Reported to have existed on Vessels bound for South-ampton, and detailed in Table C.

	1894	1895	1896	1897
Small Pox ... ..	4	4	6	15
Scarlet Fever ... ..	2	—	2	—
Typhoid Fever ... ..	10	4	10	15
Diphtheria ... ..	—	—	2	1
Measles ... ..	5	2	32	32
Puerperal Fever ... ..	—	—	1	—
Yellow Fever ... ..	—	—	2	3
Plague ... ..	—	—	—	1

NOTE.—In addition to these, 4 cases of Erysipelas, 6 Varicella, 1 Remittent Fever, 4 Malarial Fever, 8 Phthisis, 3 Beri-Beri, and 3 Dysentery, were reported during 1897.

**DEATHS AT SEA.**

The following is a list of Deaths reported by vessels on arrival :—

Plague ... ..	1
Yellow Fever ... ..	3
Small Pox ... ..	1
Typhoid Fever ... ..	1
Malarial Fever ... ..	1
Beri-Beri ... ..	3
Phthisis ... ..	6
Pneumonia ... ..	1
Debility ... ..	1
Sudden Death (Inquest) ... ..	1
Accident ... ..	1



## SMALL POX.

Although fifteen cases were reported by vessels as having occurred during the voyage, only three cases were landed at this Port and removed for isolation to the temporary floating hospital "Alliance," the permanent floating hospital "Adelaide" being occupied by a large number of Scarlet Fever cases, owing to the insufficient accommodation of the Borough Hospital.

## TYPHOID FEVER.

Fifteen cases were reported; the action taken in each case will be found in Table C. Samples of water were chemically examined from vessels on which Typhoid Fever had occurred during the voyage, and where necessary the water tanks were cleansed and fresh supplies obtained

## YELLOW FEVER AND PLAGUE.

**YELLOW FEVER :—**Until the period under review the medical inspection of vessels arriving from districts affected with this disease, or being infected either on arrival or during the voyage, was under the separate control of the Customs by a special Medical Officer in accordance with the regulations of the Privy Council. The Public Health Act of 1896 has now transferred the duties of Medical control to the Port Sanitary Authorities. This transference particularly affects the Southampton Port Sanitary Authority, as frequent communication exists between it and ports in the West Indies and River Plate districts in which Yellow Fever nearly always exists either in sporadic or epidemic form.

Towards the end of the year Yellow Fever became epidemic in Jamaica, and vessels arriving from the infected district were carefully observed. Owing to the precautions taken by the Shipping Companies in prohibiting shore leave while in infected ports, only three cases occurred on vessels arriving at this port from the infected district as follows :—

(a). S.S. "Nile," from Buenos Ayres, with 144 crew and 133 passengers, arrived September 10th. Your Medical Officer was awaiting her arrival in the river off Netley; she was boarded without delay. The patient having died at sea, the infected portions of the vessel were disinfected by the Port Sanitary Authority, and the names and final destinations of the passengers were forwarded to the Sanitary Authorities of the various districts. The delay occasioned was trivial and the ship proceeded to Dock.

(b). S.S. "Medway," arrived October 14th, from the West Indies, with 109 crew and 83 passengers. On boarding at Netley it was found that she had had two deaths—members of the crew—from Yellow Fever on October 8th. Exactly similar precautions were taken in this case.

PLAGUE :—During the year a serious recrudescence of this disease occurred in India, more particularly at Bombay.

The duties of medical inspection of an infected vessel or vessels from districts infected with this disease have also been transferred to the Port Sanitary Authority. If we were to consider merchant vessels alone there would be little anxiety as far as this Port is concerned as we have no regular lines trading between Bombay and Southampton. Within recent years, however, we have become an important trooping station and in consequence have during the season (which is eight months in the year), frequent communication by transport vessels bringing home soldiers from Plague infected districts. These vessels carry usually between twelve and thirteen hundred troops, and a crew exceeding one hundred and fifty, many of whom are Lascars.

From these facts it will be seen at once how impossible it would be without very serious delay to make any effectual examination single-handed, nor would such an attempt be free from questions of legal authority, inasmuch as whatever power of medical inspection the Port Medical

Officer might have over the crew, a similar examination of the troops would be surrounded by technical difficulties. This actually occurred in respect to the first arrival from Bombay before the excellent arrangements now in force were completed

### PLAGUE ON A TROOPSHIP.

The S.S. "Dilwara" was signalled from Hurst at 4.40 p.m. on Tuesday, April 6th., and arrived off Netley at 6 p.m. I visited her immediately on her arrival, in company with Col. Stackpole, Surgeon-Major Parker, and Dr. Bulstrode.

On boarding the vessel, one death from plague was notified to have occurred in the Red Sea on the 18th March. It was decided by the Military Authorities and myself to hold a conference with the Medical Staff on board, including the Ship's Surgeon, and the following details were elicited :—

The vessel left Bombay on the 11th March, and the same evening a child was reported ill. On the 12th : temperature 104 degrees, and general malaise. There was no reason for suspecting Plague, and the child was isolated in a cabin. On the 15th : swelling of the lymphatics in axilla commenced. 16th : tenderness right side of neck. 17th : general swelling and distinctive appearance of the glands, side of neck ; with cyanosis. 18th : glands left side of neck swollen ; double pneumonia ; heart failure ; death at 11 a.m. ; buried at 1 p.m. 300 miles west of Perim.

The child was first isolated in the Women's Hospital, and on the 16th was removed to a temporary canvas hospital on the poop deck. The whole of No. 3 troop deck was disinfected, and the Women's Hospital disinfected and re-painted.

On arrival at Suez the vessel was put into quarantine for six days. The mother and father of the child, who had been in isolation with the patient, were removed to Moses Wells for quarantine.



On endeavouring to obtain the history of the infection we were informed that this family had come from Kolaba, and that immediately before their leaving Kolaba for embarkation a death had occurred in a neighbouring bungalow. The child had also complained of feeling unwell immediately before embarkation ; and from other information received, we were of opinion that the infection had been gained in Kolaba, and not on the vessel in which the people sailed.

We were also informed that there had been no other case of plague during the voyage, nor any disease resembling plague in any way. The whole of the Medical Staff had kept a systematic inspection of the troops, women, and children under their respective charges, which consisted of a minute weekly examination.

In regard to the Ship's Crew : No member of the Ship's Crew or Officers had been allowed to land at Bombay, and before leaving that port they had been stripped and examined by the Chief Port Medical Officer, with three Medical Assistants.

The history of the quarantine at Suez is interesting, inasmuch as the Ship was put in quarantine for six days four miles below Suez, and boats were anchored round the vessel to prevent anyone having communication with same, or having communication with shore. An offer was made to the Captain of the vessel that he might proceed through the Canal in quarantine provided he carried on his Pilot to England ; this he refused to do, and subsequently they allowed him to proceed on agreeing to send the Pilot back from Port Said in a special launch in order that he might go into quarantine at Moses Wells for ten days, and further that it would be necessary to send with the vessel a steam launch belonging to the Suez Port Sanitary Authority, for which there would be a charge of £1 per hour until it was returned, exclusive of the wages and expenses of the men. In addition to this a land guard was formed of camel-mounted officers of the Sanitary Authority, who were sent along the Canal with instructions to see that no communication was had with the shore ; the cost of which had to be paid by the Ship.



After eliciting all facts of the disease in question, and to prevent any risk of importation of infection, the following course was decided upon : Inasmuch as the troops could not be disembarked under any circumstances until Wednesday morning, and it being at that time dark, it was decided that all persons on board should be mustered and inspected as soon after daybreak as practicable. All women and children who had been located on the second troopdeck (No. 16), were, with all their belongings, removed to the Floating Hospital, and after being provided with clothing by the Port Sanitary Authority, their effects were removed to the Port Sanitary Disinfector. This removal commenced at 10 a.m. on the morning of the 7th, and the 42 women and children kept at the Floating Hospital while a thorough disinfection of their clothing was carried out. They were returned to the Disembarkation Shed in the Docks at 11 a.m. on the morning of the 8th.

The infected portions of the Ship were first sprayed with a solution of per chloride of mercury, and afterwards fumigated.

The invalid troops, about 245 in number, were landed by tender from the "Dilwara" direct to Netley Hospital.

All articles of clothing and personal property which we had reason to believe had been exposed to infection, were removed from the "Dilwara" to the Port Sanitary Disinfector, and returned after disinfection.

The work at the Disinfector was commenced at 11 o'clock in the forenoon of the 7th. The articles were thoroughly disinfected, and returned to the Trooping Shed by 12 o'clock noon on the 8th. The work of disinfection was carried out continuously : necessitated by the large quantity of articles, the particulars of which follow :—

Soldiers Kits and Bags complete	...	352
Chests and Boxes	... ..	74
Bundles	... ..	1
Total number of articles disinfected		12,400

The total number of troops on board was 1,134 ; crew 172, including 102 Natives and 70 Europeans.

Of the 1,134 troops, 270 had been in Kolaba previous to embarkation at Bombay.

### EXPENSES.

The extra expenses incurred by the Port Sanitary Authority, and recovered from Military Authorities, were as follows :—

To expenses of maintenance of 40 men, women, and children removed from Troopship “Dilwara,” for one day and night while their personal clothing was disinfected ... ..	6 0 0
Van and horse hire as per Messrs. White & Co.’s account ... ..	4 8 6
Labour and Disbursements ... ..	1 19 0
Total	£12 7 6

**TABLE F.**  
TROOPSHIPS ARRIVING IN 1897.

Date of Arrival.	Name of Ship.	Whence.	No. of Passengers (Troops).
31st January, 1897	Dilwara	Bombay	1334
14th February „	Dunera	„	1193
4th March „	Britannia	„	1331
18th „ „	Victoria	„	1396
18th „ „	Annubis	Malta	265
28th April „	Tahor	Alexandria	402
18th May „	Shanghai	Bombay	567
26th „ „	Clive	„	219
23rd June „	Dunera	Cape Town	1197
5th November „	Nubia	Bombay	1365
19th „ „	Simla	„	1222
10th December „	Dilwara	„	780
17th „ „	Dunera	„	1364

## THE HOSPITALS OF PASSENGER SHIPS.

The following table shows in a condensed form the result of the investigation of twenty-eight passenger vessels using this port, with regard to the accommodation provided for the isolation of the infectious sick, and protection of the travelling public.

In my opinion, there is a necessity for great improvement, more especially with regard to :

- (a) The situation and surroundings of the hospitals.
- (b) The cubic capacity provided for each patient.
- (c) The ventilation and lighting of the hospital.
- (d) Lavatory accommodation.
- (e) The proportion of Berths to Crew and Passengers.

Great improvement in many of these details could be made without imposing any hardships upon the owners.

**SITUATION AND SURROUNDINGS.**—The best situation for a ship's hospital is, in my opinion, the centre of the poop deck, as far aft as possible, permitting free access of air to all sides. In several of the more recently built ships this position has been selected.

It should have no communication with any part below, the only means of access being from the poop deck.

It should be supplied with a separate lavatory, containing closets and bath.

There should be means of isolating two separate varieties of infectious disease, and provision made for the separation of the sexes.

**CUBIC CAPACITY.**—It would be impossible to secure anything approaching the recognised required cubic capacity for the infectious sick, and any deficiency should be balanced by the most careful attention to ventilation.

In the vessels examined, it will be seen that the minimum amount of cubic capacity given is 89, and the maximum 252 cubic feet. I am of opinion the minimum allowed should not be under 200 cubic feet, with sufficient inlets for the free admission of warmed fresh air, and outlets for the extraction of the vitiated air. The situation for the hospital mentioned would easily allow these requirements, and secure efficient lighting during the day. As most passenger vessels are now fitted with electric light, the artificial lighting does not require further comment.

**LAVATORY ACCOMMODATION.**—Separate lavatory accommodation is greatly needed.

The columns in the accompanying table clearly show the defects which exist in ships' hospitals, and need no further remarks.





E.

## SHIPS' HOSPITALS.

Provision for Ventilation.	Situation of Hospitals.	Surroundings of Hospitals.	Conclusions.
No other means than by the opening of the two ports (Temporary Ventilation)	Port side of the ship on the main deck, immediately on foreside of No. 2 hold	2nd class companion facing door of Hospital Dispensary immediately forward. Hospital in an enclosed space between decks	Badly ventilated. Useless for isolation purposes, being situated in <i>fore</i> part of vessel, and between decks, passengers and crew having access around Hospital No accommodation for <i>both</i> sexes
ditto	ditto	ditto	ditto
In addition to the opened Port, there is an opening over the door 4-ft. 6-in. x 6-in., communicating with 1st Class Saloon	On the fore part of main deck, starboard side	Door opens into 1st class saloon Hospital in an enclosed space between decks	Very badly situated. Interior of Hospital communicating with 1st class saloon Hospital situated in <i>fore</i> part of vessel, and between decks Passengers and crew have access around Hospital
ditto	ditto	ditto	ditto
No. 1. 5 Ports and 1 mushroom ventilator in roof. 1-ft. diam. No. 2, 4 Ports and 1 mushroom ventilator in roof. 1-ft. diam.	Both are situated on the spar deck and beneath poop deck. No. 1 on port side, No. 2 on starboard. The Hospitals face each other	Trough closets for the use of the steerage passengers are situated immediately aft of the Hospitals There is a w.c. and bath room for patients' use placed aft of No. 1, and communicating with the interior of the Hospital by a door	Both Hospitals are badly situated for isolation purposes, being in a closed space between decks The steerage passengers have to pass the doors to reach their closet accommodation
ditto	ditto	ditto	ditto
ditto	ditto	ditto	ditto



Provision for Ventilation.	Situation of Hospitals.	Surroundings of Hospitals.	Conclusions.
Only the two Ports in each Hospital.	On spar deck and beneath poop deck No. 1 on starboard side, No. 2 on port side	The washhouse and bathrooms for steerage passengers are in the centre of the spar deck, between the two Hospitals Closets for steerage passengers are immediately aft of Hospitals	Badly ventilated Steerage passengers must pass Hospital to reach their washing and closet accommodation The Hospitals are also between decks, and are, therefore, of little use for isolation.
ditto	ditto	ditto	ditto
ditto	ditto	ditto	ditto
ditto	ditto	ditto	ditto
1 Port and 1 cowl ventilator in roof, 8-in. diam.	In the after end of the vessel, on port side of the main deck	Door of Hospital opens into 3rd class dining saloon Pantry is situated immediately aft, and 3rd class cabins forward There is a w.c. in the Hospital, separated from the rest of the interior by a wooden partition	Badly lighted and ventilated Useless as a means of isolation No accommodation for <i>both</i> sexes
1 Port and skylight; also by a "hit and miss" ventilator in the door of each Hospital.	The Hospitals are placed back to back in the middle of the poop deck	The wheelhouse is immediately aft, otherwise the Hospitals are open to the air on all sides	Very satisfactory for all purposes
ditto	ditto	ditto	ditto
ditto	ditto	ditto	ditto

No. of Ship.	Total No. of crew & passengers carried.	No. of Hospitals provided.	No. of Hospital berths.	Proportion of crew and passengers to Hosp. berths.	Cubic capacity of Hospitals.	Height of Hospitals.	Air Space to each Berth.	Provision for Lighting.
16	942	4	8	119 to 1	No. 1 & 2 420-ft. each. No. 3 & 4 315-ft. each.	7-ft. each	No. 1 & 2 210-cu.-ft. No. 3 & 4 158-cu.-ft.	No. 1 & 3 each by 1 Porthole, 1-ft. diam., and by skylight, 4-ft. by 1-ft. 10-ins. No. 2 & 4 each by 1 Porthole 1-ft. diam.
17	ditto	ditto	ditto	ditto	ditto	ditto	ditto	ditto
18	ditto	ditto	ditto	ditto	ditto	ditto	ditto	ditto
19	1450	2	4	362 to 1	No. 1 & 2 422 cubic ft. each	No. 1 & 2 7-ft. each	220 cubic feet	Each Hospital has 1 Porthole 1-ft. in diam., also a skylight 4-ft. by 1-ft. 6-ins.
20	1350	ditto	ditto	340 to 1	ditto	ditto	ditto	ditto
21	852	1	2	426 to 1	504-ft.	8-ft.	252 cubic feet	1 Porthole 14-ins. in diam.
22	900	ditto	ditto	450 to 1	ditto	ditto	ditto	ditto



Provision for Ventilation.	Situation of Hospitals.	Surroundings of Hospitals.	Conclusions.
<p>All the Hospitals are ventilated by the Portholes and by a "hit &amp; miss" ventilator in the doors.</p> <p>Hospitals 1 and 2 communicate by means of a space under the bulkhead, 6-ins. by 7-ft. 6-ins.</p>	<p>In the middle of poop deck.</p> <p>No. 1 and 2, are back to back.</p> <p>No. 3 and 4, also back to back, and immediately aft of of the first pair.</p>	<p>The only structure aft of the Hospitals is the Wheelhouse.</p> <p>Under ordinary circumstances closed berth 3rd class passengers have access to poop deck</p> <p>Hospitals open to air on all sides excepting aft</p>	<p>Very satisfactory for all purposes</p>
ditto	ditto	ditto	ditto
ditto	ditto	ditto	ditto
<p>1 Port and skylight also by a "hit and miss" ventilator in door of each Hospital.</p>	<p>The Hospitals are placed back to back in middle of poop deck.</p>	<p>The Wheelhouse is immediately aft, otherwise the Hospitals are exposed to air on all sides.</p>	ditto
ditto	ditto	ditto	ditto
<p>1 Porthole, an opening over door 7-ft. by 4-ins., and by a "hit &amp; miss" ventilator in door.</p>	<p>Amidships on starboard side of spar deck.</p>	<p>Dispensary immediately forward, 1st class lavatory next aft. Donkey engine facing door of Hospital</p>	<p>Badly situated. No accommodation for both sexes.</p>
ditto	ditto	ditto	ditto





Provision for Ventilation.	Situation of Hospitals.	Surroundings of Hospitals.	Conclusions.
<p>No. 1, 3 Ports and 1 ordinary ventilating shaft, 10-ins. by 4-ins.</p> <p>No. 2 &amp; 3, 2 Ports and 2 ordinary ventilating shafts, 6-ins. by 4-ins.</p>	<p>No. 1, Port side of spar deck aft, immediately forward of mizzen-mast.</p> <p>No. 2, starboard of spar deck beneath poop deck.</p> <p>No. 3, on Port side, facing No. 2</p>	<p>No. 1, w.c. and bathroom for patients forward communicating with Hospital by a door in same</p> <p>No. 2, w.c. and bathroom for patients aft, door leading into same from Hospital. The 3rd class w.c.'s &amp; wash-house are just further aft.</p> <p>3rd class companion faces door of Hospital.</p> <p>No. 3, ditto</p>	<p>Badly situated for Isolation purposes, as all Hospitals are in enclosed spaces between Decks, and 3rd class passengers <i>must</i> have access around Hospitals 2 and 3, in order to reach their closet accommodation, and also in coming up from below</p>
ditto	ditto	ditto	ditto
<p>No. 1, 4 Ports and a circular cowl ventilator, 6-ins. in diam.</p> <p>No. 2, 2 Ports</p>	<p>Under poop deck in middle of spar deck. No. 2 being immediately aft of No. 1, and deviated from it in part by a companion leading to the Stewards' rooms and Printing Office, which are underneath the Hospitals</p>	<p>The Hospitals are in an enclosed space and are badly lighted, artificial light being always required.</p> <p>There is a w.c. in the interior of No 1 Hospital, shut off from the rest of interior by a wooden partition.</p> <p>The Steward's sleeping quarters are immediately aft of Hospitals.</p>	<p>Insufficient light and ventilation. Situation bad.</p>
ditto	ditto	ditto	ditto



Provision for Ventilation.	Situation of Hospitals.	Surroundings of Hospitals.	Conclusions.
<p>No. 1, 2 Ports and steam ventilators, each having an internal area of 2-sq.-ft.</p> <p>No. 2, 1 Port and steam ventilators, internal area of each being 2-sq.-ft.</p> <p>No. 3, ditto No. 2, in addition there are two latticed ventilators on either side of the Port, which work automatically, being open when the Port is closed.</p>	<p>No. 1, on Port side of spar deck under poop deck.</p> <p>No. 2 &amp; 3, on the spar deck on starboard bow of vessel. The doors of the Hospitals facing each other on either side of a narrow passage way, leading off from the main run of spar deck.</p>	<p>No. 1, trough closets for the use of crew are immediately forward of Hospital. There is a w.c. for the use of patients in the Hospital</p> <p>All the Hospitals are in enclosed spaces between decks, and passengers and crew have access around them</p>	<p>All the Hospitals are badly situated, No. 2 and 3 being in the forepart of the vessel, are altogether useless for Isolation</p>
ditto	ditto	ditto	ditto

## GENERAL SANITARY INSPECTION.

**TABLE G.**

Showing number of vessels inspected, with per centage of defects.

Date.	Foreign Vessels Visited.	Coasting Vessels Visited.	Total Inspections.	Number found Defective.	Defective per centage.
1890	1,750	3,570	5,320	75	1·4
1891	1,755	3,840	5,595	88	1·5
1892	1,788	2,819	4,607	57	1·2
1893	2,976	2,513	5,489	162	2·95
1894	2,196	4,190	6,386	239	3·74
1895	2,212	3,822	6,034	111	1·83
1896	2,312	3,196	5,508	105	1·9
1897	1,692	3,345	*5,037	105	2·1

\* Includes 121 re-visits.

INSPECTION OF VESSELS :—As in previous years the majority of vessels arriving in the port have been inspected by the Officers of the Port Sanitary Authority. Both passenger and cargo vessels entering the docks are boarded and examined immediately they arrive alongside the quays. Vessels which only discharge passengers off Hamble are waited upon by tenders ; an Officer of the Sanitary Authority accompanies each tender and receives a report as to the health of the persons on board, but more particularly of those who are to be landed at Southampton. In many instances the steam ambulance accompanies the tender in readiness to remove any infectious disease that may exist, without causing delay to the vessel. In the event of sailing vessels not entering dock, and vessels proceeding to Eling, Redbridge, Bursledon, or other portions of the Port Sanitary District, they are examined as soon after their arrival as possible.

The number of inspections during the year 1897 amounted to 5,037 ; of this number 121 must be considered as re-visits.



As a result of the general inspection, many unimportant nuisances were discovered and abated by verbal request. Nuisances of an important character were reported in respect of 105 vessels ; these were abated by notices. The nuisances principally complained of were as follows :—uncleanly fore-castles ; storage of ships' gear, paint, &c., in fore-castle ; damp fore-castles, due to uncovered iron decks ; insufficient ventilation ; uncleanly water tanks ; deposits of decomposing vegetables, &c.

### FLOATING HOSPITALS.

PERMANENT HOSPITAL SHIP “ADELAIDE.”—This vessel has again been invaluable in relieving the overcrowding of the inadequate Borough Isolation Hospital. During the year it received 65 cases of Scarlet Fever.

TEMPORARY HOSPITAL SHIP “ALLIANCE.”—In my last Annual Report I advised you to retain the temporary hospital ship until the completion of the new Borough Hospital, which advice you acted upon. During the year two cases of Measles and eight cases of Small Pox were isolated in this vessel. Three of the Small Pox cases were removed from vessels off Netley and the remaining five from the Borough. The speedy removal of the Borough cases in all probability prevented a more serious outbreak. As the permanent floating hospital was occupied by Scarlet Fever cases the isolation of the Small Pox patients would have been impossible had we not the “Alliance” in reserve. These facts again justify the action of the Committee in incurring the expenditure necessary to provide the temporary floating hospital.

In conclusion I desire to express my sincere thanks to the Collector of Customs and his officers for the continuance of their courtesy and valuable assistance. I further wish to cordially thank my assistant Dr. Russell for his willing help in carrying out satisfactorily the responsible duties of this Port.

## LIST OF REGULAR PASSENGER STEAMERS SAILING TO AND FROM SOUTHAMPTON.

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### ROYAL MAIL STEAM PACKET COMPANY.

Sailing to and from—Buenos Ayres, Monte Video, Rio de Janiero, Bahia, Pernambuco, Lisbon, Vigo, West India Ports, Colon, Savanilla, Carthegena, &c.

### UNION STEAM SHIP COMPANY.

Sailing to and from—Delagoa Bay, Natal, East London, Port Elizabeth, Mossel Bay, Cape Town, St. Helena, Teneriffe, Madeira, &c.

### AMERICAN LINE.

Sailing to and from—New York.

### CASTLE LINE ROYAL MAIL STEAMERS.

Sailing to—Grand Canary, Cape Town, Algoa Bay, East London, Natal, Delagoa Bay, &c.

### NORTH GERMAN LLOYD.

Sailing to and from—Sydney, Melbourne, Adelaide, Genoa, Naples, Port Said, Suez, Aden, Colombo, Singapore, Hong Kong, Shanghai, Japan, New York, Buenos Ayres, Monte Video, Las Palmas, Vigo, Antwerp, Bremen, &c.

### HAMBURG-AMERICAN LINE.

Sailing to and from—Hamburg and New York.

### “ NEDERLAND ” STEAM SHIP COMPANY.

Sailing to and from—Genoa, Batavia, Sourabaya, Samarang, Padang, Amsterdam, &c.

### ROTTERDAMSCH LLOYD STEAM SHIP COMPANY.

Sailing to and from—Marseilles, Padang, Batavia, Cheribon, Samarang, Sourabaya, Macassar, Amsterdam, &c.

### GENERAL STEAM NAVIGATION COMPANY.

Sailing to and from—Bordeaux, Charante, &c.

# UNITED STEAM SHIP COMPANY OF COPENHAGEN.

Sailing to and from—Valencia, Messina, Tarragona, Barcelona, Genoa, Leghorn, Naples, Malaga, Cadiz, Copenhagen, and Baltic Ports.

# BRITISH AND IRISH STEAM PACKET COMPANY.

Sailing to and from—Dublin, Cork, &c.

# NUPPUN YUSEN KAISHA.

Sailing to and from—Japanese Ports, Antwerp, &c.

# THE PENINSULAR AND ORIENTAL, AND THE BRITISH INDIA COMPANIES.

Carrying Troops to and from India.

# CORK STEAM SHIP COMPANY.

Sailing to and from—Liverpool, Rotterdam, Antwerp, &c.

# LIVERPOOL, BRISTOL, AND LONDON STEAM SHIP COMPANY.

Sailing to and from—Manchester, Liverpool, Plymouth, &c.

# LONDON AND LIVERPOOL STEAM SHIP COMPANY.

Sailing to and from—London and Liverpool.

# CLYDE SHIPPING COMPANY.

Sailing to and from—Glasgow, Plymouth, Newhaven, Dover, London, &c.

# CITY OF CORK STEAM PACKET COMPANY.

Sailing to and from—Cork, Plymouth, London, &c.

# SOUTH-WESTERN STEAM PACKET COMPANY.

Sailing daily to and from—Jersey, Guernsey, St. Malo, Cherbourg, Havre, &c.

# CARGO STEAMERS.

In addition the above, several lines of cargo steamers regularly use the Port.

## APPENDIX A.

FORM OF MEDICAL CERTIFICATE  
TO  
SOUTHAMPTON PORT SANITARY AUTHORITY.

The Master of the S.S.

From what Port have you come ?

Number of Crew ?

Total number of Passengers ?

HEALTH.

Has there been any sickness of an infectious nature during the voyage, or at time of arrival, among either Crew or Passengers ?

If there has been any sickness, kindly state nature and result :

Signed.....Surgeon

.....Master

Date.....189







